

## LIST OF CONTENTS

### NUMBER 1

- |   |    |  |
|---|----|--|
| D. W. Chen, F. T. K. Au,<br>L. G. Tham and P. K. K. Lee | 1  | Determination of initial cable forces in prestressed concrete cable-stayed bridges for given design deck profiles using the force equilibrium method |
| E. Kita, K. Higuchi and<br>N. Kamiya                    | 11 | <i>r</i> - and <i>hr</i> -adaptive boundary element method for two-dimensional potential problem   |
| K. Ando, J. Mitsugi and<br>Y. Senbokuya                 | 21 | Analyses of cable-membrane structure combined with deployable truss  |
| A. S. K. Kwan   | 41 | A simple technique for calculating natural frequencies of geometrically nonlinear prestressed cable structures                                       |
| Q. Chen and Y. W. Chan                                  | 51 | Integral finite element method for dynamical analysis of elastic-viscoelastic composite structures   |
| W. Chen, C. Shu, W. He and<br>T. Zhong                  | 65 | The application of special matrix product to differential quadrature solution of geometrically nonlinear bending of orthotropic rectangular plates   |
| F. C. Mbakogu and<br>M. N. Pavlović                     | 77 | Analysis of mid-surface symmetric layered anisotropic shells by the two-surface truss model  |
| E. De Santiago and K. H. Law                            | 97 | A distributed implementation of an adaptive finite element method for fluid problems   |

I Calendar

III Announcement

IV Call for Papers

### NUMBER 2

- |                                  |     |   |
|----------------------------------|-----|---|
| J. Lee                           | 121 | Free vibration analysis of delaminated composite beams                    |
| A. R. Salazar and A. Haldar      | 131 | Structural responses considering the vertical component of earthquakes    |
| K. Bassayya and<br>U. Shrinivasa | 147 | A 14-node brick element, PN5X1, exactly representing linear stress fields |
| K. Bassayya and<br>U. Shrinivasa | 167 | A 14-node brick element, PN5X1, for plates and shells                     |

- R. Mahnken** 179 A comprehensive study of a multiplicative elastoplasticity model coupled to damage including parameter identification
- R. Luciano and R. Zinno** 201 A micromechanical approach for the analysis of damage in laminated composite structures
- C. Basaran and R. Chandaroy** 215 Using finite element analysis for simulation of reliability tests on solder joints in microelectronic packaging
- C-Y. Lin and W-T. Chen** 233 Stochastic multistage algorithms for multimodal structural optimization
- M. Aufaure** 243 A three-node cable element ensuring the continuity of the horizontal tension; a clamp-cable element

## I Calendar

## NUMBER 3

- C. H. Liu, J. Y. Wong and H. A. Mang** 253 Large strain finite element analysis of sand: model, algorithm and application to numerical simulation of tire-sand interaction
- R. Y. Tan and M. C. Huang** 267 System identification of a bridge with lead-rubber bearings
- K. C. Park** 281 Partitioned solution of reduced-integrated finite element equations
- C. P. Pantelides and B. C. Booth** 293 Computer-aided design of optimal structures with uncertainty
- Y. Xu, B. Moran and T. Belytschko** 309 Self-similar crack expansion method for analysis of cracks in an infinite medium or semi-infinite medium
- W.-J. He** 319 An equivalent boundary integral formulation for bending problems of thin plates
- E. M. B. R. Pereira and J. A. T. Freitas** 323 Numerical implementation of a hybrid-mixed finite element model for Reissner-Mindlin plates
- G. S. Sekhon and R. S. Bhatia** 335 Generation of exact stiffness matrix for a spherical shell element
- J. H. Kim and H. S. Kim** 351 A study on the dynamic stability of plates under a follower force
- S. Hassiotis** 365 Identification of damage using natural frequencies and Markov parameters

- T. S. Kim and Y. Y. Kim** 375 Mac-based mode-tracking in structural topology optimization

I Calendar

NUMBER 4

- M. A. Langthjem and Y. Sugiyama** 385 Optimum design of cantilevered columns under the combined action of conservative and nonconservative loads. Part I: The undamped case
- M. A. Langthjem and Y. Sugiyama** 399 Optimum design of cantilevered columns under the combined action of conservative and nonconservative loads. Part II: The damped case
- Y. Başar and M. H. Omurtag** 409 Free-vibration analysis of thin/thick laminated structures by layer-wise shell models
- A. Benjeddou** 429 Vibrations of complex shells of revolution using B-spline finite elements
- K. Bassayya, K. Bhattacharya and U. Shrinivasa** 441 Eight-node brick, PN340, represents constant stress fields exactly
- G. Gusic, A. Combescure and J. F. Jullien** 461 The influence of circumferential thickness variations on the buckling of cylindrical shells under external pressure
- Z. Friedman and J. B. Kosmatka** 479 Torsion and flexure of a prismatic isotropic beam using the boundary element method
- G. Yu, W. J. Mansur, J. A. M. Carrer and L. Gong** 495 Stability of Galerkin and collocation time domain boundary element methods as applied to the scalar wave equation

I Calendar

NUMBER 5

- A. K. Noor, S. L. Venneri, D. B. Paul and M. A. Hopkins** 507 Structures technology for future aerospace systems
- M. S. Mahmoud, M. Zribi and Y. C. Soh** 521 Optimal control of seismically-excited building structures
- M. Quecedo, M. Pastor and O. C. Zienkiewicz** 535 Application of a fractional step method to localization problems

- |   |            |  |
|---|------------|--|
| <b>P. Muthukumaran,<br/>K. Demirli, I. Stiharu and<br/>R. B. Bhat</b> | <b>547</b> | Boundary conditioning for structural tuning using fuzzy logic approach                   |
| <b>H.-P. Chen and N. Bicanic</b>                                      | <b>559</b> | Assessment of damage in continuum structures based on incomplete modal information       |
| <b>E. J. Sapountzakis and<br/>J. T. Katsikadelis</b>                  | <b>571</b> | Elastic deformation of ribbed plates under static, transverse and inplane loading        |
| <b>H.-G. Kwak and Y.-J. Seo</b>                                       | <b>583</b> | Long-term behavior of composite girder bridges   |
| <b>A. F. Saleeb, T. E. Wilt and<br/>W. Li</b>                         | <b>601</b> | Robust integration schemes for generalized viscoplasticity with internal-state variables |

## I Calendar

## NUMBER 6

- |   |            |  |
|---|------------|--|
| <b>E. A. Gotsulyak, Y. Z. Totoev<br/>and D. E. Prusov</b> | <b>629</b> | The influence of ribs stiffness and shape imperfections on stability of a ribbed folded plate structure    |
| <b>S. Ganzerli and<br/>C. P. Pantelides</b>               | <b>639</b> | Optimum structural design via convex model superposition   |
| <b>H. M. Negm and<br/>K. Y. Maalawi</b>                   | <b>649</b> | Structural design optimization of wind turbine towers  |
| <b>J.-M. Ueng, C.-C. Lin and<br/>P.-L. Lin</b>            | <b>667</b> | System identification of torsionally coupled buildings   |
| <b>S. Vijayakumar, T. E. Yacoub<br/>and J. H. Curran</b>  | <b>687</b> | A node-centric indirect boundary element method: three-dimensional displacement discontinuities            |
| <b>A. Prokić</b>  | <b>705</b> | Computer program for determination of geometrical properties of thin-walled beams with open-closed section |
| <b>Q. J. Zhang and<br/>M. G. Sainsbury</b>                | <b>717</b> | The Galerkin element method applied to the vibration of rectangular damped sandwich plates                 |
| <b>D. Manickarajah, Y. M. Xie<br/>and G. P. Steven</b>    | <b>731</b> | Optimum design of frames with multiple constraints using an evolutionary method                            |

## I Calendar

## III List of contents and author index for Volume 74, 2000

